

THE NETHERLANDS

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In terms of world production, the Netherlands was a modest producer of metallic and nonmetallic minerals and mineral products. It was very important, however, as a regional producer of natural gas and petroleum for the European market and played a major role as a transshipment center for mineral materials entering and leaving continental Europe.

The Dutch economy, which has been expanding for 3 years, performed well again in 2000 with a 4.0% growth in the gross domestic product. Growth was being driven chiefly by increases in exports of goods and services, consumption, and investment. Much of the Netherlands' reputation as a trading nation was based on the performance of Dutch industry. Commerce and industry are closely related: industrial products accounted for 70% of exports and were produced in a broad range of sectors (Netherlands Foreign Trade Agency, February 2001, *The Dutch economy in 2000—Summary*, accessed March 19, 2001, at URL <http://www.hollandtrade.com/engels/en020101.htm>).

Rotterdam, which was the world's largest container port and a major European transportation hub, remained extremely important as a shipping and storage center. With the ever expanding inland transportation systems, goods entering or leaving Rotterdam can originate in or be destined for almost anywhere in continental Europe.

Production of mineral commodities generally remained the same or dropped slightly during 2000. The high cost of social benefits contributed to the production costs of Dutch products thus making them less competitive on the world market. The only mining operations left in the Netherlands in 2000 were involved in the extraction of limestone, peat, salt, and sand and gravel. The metal-processing sector relied almost exclusively on imported ores and concentrates and scrap (table 1).

The Government has reduced its role in the economy since the 1980s, and privatization has continued with little debate or opposition. Nevertheless, the state dominated the energy sector and played a large role in the aviation, chemicals, steel, telecommunications, and transportation sectors (table 2).

The Central Bank announced plans to sell 300 metric tons (t) of gold, which was about a third of the nation's gold reserve. The timetable was for 100 t to be sold in 2000, and the remaining 200 t to go from 2001 to 2005. The bank had sold 400 t in 1992 (Engineering and Mining Journal, 2000).

In midyear 1999, Koninklijke Hoogovens BV and British Steel plc of the United Kingdom announced the two companies would be merged by 2000, thus creating the world's third largest steelmaker after Posco Steel of the Republic of Korea and Nippon Steel of Japan. The newly formed company would be called the Corus Group. Aside from its large capacity—23 million

metric tons combined output of crude steel in 1998—Corus would have the capacity to produce multiple metals, including stainless steel from the United Kingdom and aluminum from the Netherlands. Merging the two companies was expected to generate operational savings of about \$285 million in 3 years (Metal Bulletin Monthly, 1999).

In 2000, Budel Zinc BV's smelter received its first shipment of zinc concentrates from its parent company Pasminco Europe BV's new Century Mine in Australia. The 10,000 t that was received was stockpiled, and Budel continued to use concentrates from its additional sources before switching to Century material. Century concentrates had been tested, and no quality problems were reported (Metal Bulletin, 2000).

The Netherlands was active on the international energy supply scene in more than one respect. The country supplied energy to Europe by pipelines and other methods and served as the entrepôt for oil products for northwestern Europe.

After Aardolie Maatschappij BV struck one of the largest gasfields in the world in the north of the Netherlands in 1959, the decision was made to begin drilling for natural gas and petroleum in the North Sea. Natural gas has become the most important mineral fuel produced in the Netherlands. The Groningen Gasfield at Slochteren is one of the world's largest producing natural gasfields (The Netherlands Foreign Trade Agency, April 2000, *The upstream gas and oil industry in the Netherlands*, accessed September 19, 2000, at URL <http://www.hollandtrade.com/engels/en020418.htm>).

References Cited

- Engineering and Mining Journal, 2000, Netherlands: Engineering and Mining Journal, v. 201, no. 2, February, p. 48.
Metal Bulletin Monthly, 1999, Men of metal: Metal Bulletin Monthly, no. 347, November, p. 8.
Metal Bulletin, 2000, Budel receives first shipment of zinc concentrates: Metal Bulletin, no. 8447, February 3, p. 7.

Major Sources of Information

- Geological Survey of the Netherlands
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TABLE 1
NETHERLANDS: PRODUCTION OF MINERAL COMMODITIES 1/ 2/

(Metric tons unless otherwise specified)

Commodity 3/	1996	1997	1998	1999	2000 e/	
METALS						
Aluminum metal:						
Primary	227,027	231,800	264,000 e/	286,400	300,000	
Secondary	150,000	150,400	102,000	105,000	105,000	
Cadmium metal, primary	603	718	739	731	730	
Iron and steel:						
Ore, sintered (from imported ore)	4,250,000 e/	4,250,000 e/	3,376,000	3,094,000	3,000,000	
Metal:						
Pig iron, including blast-furnace ferroalloys (if any)	5,545,000	5,804,000	5,561,000	5,307,000	4,969,000 4/	
Steel:						
Crude	6,325,000	6,640,000	6,379,000	6,077,000	5,667,000 4/	
Semimanufactures	4,810,000	5,175,000	4,964,000	5,000,000 e/	5,000,000	
Lead, metal, refined, secondary	22,000 e/	19,500 e/	13,200	19,900	20,000	
Zinc, metal, primary	207,400	208,800	218,700	221,400	215,000	
INDUSTRIAL MINERALS						
Cement, hydraulic e/	3,140,000	3,230,000	3,200,000	3,200,000	3,200,000	
Magnesium compounds: e/						
Chloride	125,000	25,000	25,000	23,000	25,000	
Oxide	100,000	10,000	10,000	10,000	10,000	
Nitrogen, N content of ammonia	thousand tons	2,653	2,478	2,350 e/	2,430 e/	2,540
Salt, all types e/	do.	5,530 4/	5,500	5,500	5,000	5,000
Sand, industrial e/	do.	24 r/	24 r/	14 r/	15 e/	15
Sodium compounds, n.e.s.: e/						
Carbonate, synthetic	400,000	400,000	400,000	350,000	350,000	
Sulfate:						
Natural	20,000	20,000	20,000	20,000	20,000	
Synthetic	15,000	15,000	15,000	15,000	15,000	
Sulfur: e/						
Elemental byproduct:						
Of metallurgy	150,000	150,000	131,000	129,000	84,000 4/	
Of petroleum and natural gas	150,000	138,000	432,000	445,000	428,000 4/	
Total	300,000	288,000	563,000	574,000	512,000 4/	
Sulfuric acid, 100% H ₂ SO ₄ e/	1,250,000	1,250,000	1,250,000	1,000,000	1,000,000	
MINERAL FUELS AND RELATED MATERIALS						
Coke, metallurgical	2,800,000 e/	2,800,000 e/	2,829,000	2,247,000	2,300,000	
Gas:						
Manufactured e/	million cubic meters	10,000	10,000	10,000	10,000	
Natural:						
Gross	do.	89,700	80,000 e/	76,331	68,528	70,000
Marketed	do.	86,000 e/	86,000 e/	75,201	67,228	68,000
Natural gas liquids e/	thousand 42-gallon barrels	170,000	170,000	170,000	160,000	170,000
Petroleum:						
Crude	thousand 42-gallon barrels	21,086	21,276	19,164	19,000 e/	20,000
Refinery products:	do.					
Liquefied petroleum gas	do.	3,600 e/	3,600 e/	3,456	4,210	4,200
Mineral jelly and wax	do.	600 e/	600 e/	936	990	900
Gasoline, motor	do.	75,000 e/	75,000 e/	76,653	78,948	80,000
Naphtha and white spirit	do.	50,000 e/	50,000 e/	45,960	45,195	45,000
Jet fuel	do.	40,000 e/	40,000 e/	50,808	55,816	50,000
Kerosene	do.	500 e/	500 e/	488	473	500
Refinery gas	do.	20,000 e/	20,000 e/	11,858	11,480	12,000
Lubricants	do.	3,800 e/	3,800 e/	4,459	4,375	4,500
Residual fuel oil	do.	85,000 e	85,000 e/	102,605	81,127	81,000
Bitumen	do.	4,500 e/	4,500 e/	4,499	4,260	4,400
Unspecified	do.	25,000 e/	25,000 e/	31,913	33,313	30,000
Total	do.	308,000 e/	308,000 e/	333,635	320,187	313,000

e/ Estimated. r/ Revised.

1/ Table includes data available through March 2001.

2/ Estimated data are rounded to no more than three significant digits; may not add to totals shown.

3/ In addition to the commodities listed, the Netherlands produced construction materials, such as sand and gravel, but output was not reported, and no basis exists to make reliable estimates of output.

4/ Reported figure.

TABLE 2
NETHERLANDS: STRUCTURE OF THE MINERAL INDUSTRY IN 2000

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies	Location of main facility	Annual capacity
Aluminum				
Primary		Pechiney Nederland NV	Smelter at Vlissingen	175
Do.		Corus Group	Smelter at Delfzijl	100
Secondary		Alumax Recycling BV	Smelter at Kerkade	50
Cadmium	tons	Budelco BV (Australian Overseas Smelting Pty. Ltd, 50%; Kempensche Zinkmaatschappij Zincs de la Campine BV, 50%)	Plant at Budel-Dorplein	650
Cement		ENCI Nederland BV (Eerste Nederlandse Cement Industrie NV)	10 plants at Maastricht	2,700
Do.		Cementfabriek IJmuiden BV	3 plants at IJmuiden	1,600
Do.		Cementfabriek Rozenburg BV	2 plants at Rozenburg	920
Lead		Hollandse Metallurgische Industrie Billiton BV	Electrolytic plant at Arnhem	35
Do.		Billiton Witmetaal BV	Electrolytic plant at Naarden	6
Limestone		Ankerpoort NV (Lhoist SA, 100%)	Mines at Maastricht and Winterswijk	600
Magnesia		Nedmag Industries Mining & Manufacturing BV	Plant at Veendam	130
Do.		MAF Magnesite BV	Plant at Schiedam	40
Natural gas	million cubic meters per day	Nederlandse Aardolie Maatschappij BV (NAM)	Groningen, Leeuwarden, Assen, and other onshore gasfields and several offshore wells in the North Sea	225
Petroleum, crude	barrels per day	AMOCO, CONOCO, and UNOCAL	766 wells (204 producing) including North Sea fields: Haven, Helder, Helm, Hoorn, Kotter, Logger, and Rijn	83,500 (63,000)
Do.	do.	NAM	Onshore fields: Berkel, DeLier, Ijselmonde, Meerkapelle, Pernis, West, Pinacke, Rotterdam, Schoonebeck, Werkendam, and Zoetemeer	(20,500)
Refineries		6 companies, of which the major ones are:		1,230,500
Do.	do.	Netherlands Refining Co.	Refinery at Rotterdam	(446,000)
Do.	do.	Shell Nederland Raffinaderij BV	Refinery at Pernis	(374,000)
Do.	do.	Esso Nederland BV	Refinery at Rotterdam	(175,000)
Do.	do.	Total Raffinaderij Nederland NV	Refinery at Vlissingen	(150,000)
Salt		Akzo Salt and Basic Chemicals BV	Mines at: Hengelo Delfzijl	4,000 (2,000) (2,000)
Sand, silica		Lieben Minëralen BV	Mines at South Limburg	150
Sodium:				
Carbonate, synthetic		do.	Plant at Delfzijl	380
Sulfate, synthetic		do.	do.	600
Steel		Corus Group	Plant at IJmuiden	6,100
Zinc		Budel Zinc BV (Pasmenco Europe BV)	Plant at Budel-Dorplein	215